

# Development Concept Plan Interpretive Prospectus

PUBLIC DOCUMENTS  
DEPOSITORY ITEM

AUG 10 1993

CLEMSON  
LIBRARY



## Glen Haven Area **SLEEPING BEAR DUNES**

National Lakeshore • Michigan



**Recommended:**

Joel V. Kussman  
Chief, Branch of Planning, Central Team, Denver Service Center

March 25, 1988

Ivan D. Miller  
Superintendent, Sleeping Bear Dunes National Lakeshore

June 2, 1992

**Approved:**

David N. Given  
Acting Regional Director, Midwest Region

November 17, 1992




Development Concept Plan  
Interpretive Prospectus

November 1992

---

Glen Haven Area  
**SLEEPING BEAR DUNES**

National Lakeshore • Michigan



Digitized by the Internet Archive  
in 2012 with funding from  
LYRASIS Members and Sloan Foundation

<http://archive.org/details/developmentconce93sleepbe>

## CONTENTS

Introduction	1
Study Area	1
Previous Plans and Studies	1
Purpose of the Document	4
Planning Issues	4
Cultural Resources	4
Visitor Use and Interpretation	7
Access and Circulation	7
Description of the Area	12
Regional Setting	12
History	12
Natural Resources	13
Geology/Topography	13
Sand Dunes	13
Soils	13
Climate	13
Vegetation	14
Floodplains and Wetlands	14
Wildlife	14
Fish	15
Air and Water Quality	15
Visual Quality	15
Cultural Resources	15
Archeological Resources	15
Historic Resources	16
Visitor Use	18
Existing Development	18
The Plan	20
Objectives	20
Interpretation	20
Visitor Use and Development	21
Village Access, Circulation, and Parking	21
Interpretive Facilities	24
Adaptive Use of Historic Structures	26
Administrative Facilities	27
Other Structures	27
Maritime Museum	28
Trails	28
Campground	28
Beach Use and Picnic Facilities	29
Overlooks	29
Implementation Costs and Priorities	30

## CONTENTS

Legal Compliance / Consultation	33
National Environmental Policy Act	33
Endangered Species	33
Floodplains and Wetlands	33
National Historic Preservation Act	33
Coastal Zone Management	34

Selected References	35
---------------------	----

Planning Team	36
---------------	----

## MAPS

Region	2
Vicinity	3
Existing Conditions/Land Status	5
Village — Existing Conditions	6
Development Concept	23
Village — Development Concept	25

## TABLES

1: Glen Haven Historic Structures	17
2: Numbers of Vehicles and Visitors at Three Glen Haven Parking Areas, July-August 1985	18
3: Glen Haven Area Development Cost Estimates	31
4: Annual Operations Cost Estimates	32

## INTRODUCTION

### STUDY AREA

The Glen Lake area, which encompasses the Glen Haven study area, is a focus for visitor activity at Sleeping Bear Dunes National Lakeshore. Over 70% of the lakeshore's visitors come to this area. Attractions include the Sleeping Bear Dunes — a 5,000-acre complex of active dunes; Little Glen Lake — where a picnic area is available; the dune climb — the most visited area in the park; Stocking Scenic Drive — which offers panoramic views of Lake Michigan, the dunes, and the surrounding countryside; the former Coast Guard (lifesaving) station — which now houses a maritime museum; and Glen Haven — a historic village (see Vicinity map). The Glen Haven study area, which is the area addressed in this document, is bounded by Glen Arbor on the east, the Sleeping Bear Dunes on the west, Lake Michigan on the north, and the Glen Lake moraine (Alligator Hill) on the south (see Existing Conditions maps).

### PREVIOUS PLANS AND STUDIES

The *General Management Plan* for the national lakeshore (NPS 1979a) includes the following proposals for the Glen Haven area:

Glen Haven's village atmosphere, its historical significance in the development of the region, and its proximity to major access routes make it ideal for becoming a major tourist attraction. Interpretive themes will cover logging, agriculture, maritime history, and recreational activities. The buildings in the village and the lifesaving station will be adapted for interpretation, food service, craft sales, and management. The village atmosphere will be further enhanced by encouraging visitors to tour the site on foot and by not allowing private vehicles in the town during the summer. Road access will be provided to a parking area on the edge of the village. Public transportation between the parking area, the town, the lifesaving station, and the northern tip of Sleeping Bear Dune may be available during the peak season for those who cannot walk or prefer not to. This would also help control use of the lifesaving station and the dune. At other times of the year, visitors will be able to drive their vehicles to the lifesaving station. Access will continue to be provided to private lands in the area.

The existing dune-ride will be eliminated because of visual and physical impacts on the dunes, conflicts with hikers, and the high cost of maintaining the road.

The D. H. Day Campground just east of Glen Haven will be rehabilitated. The capacity of the campground will remain the same, but there will be fewer campsites per acre, improving the visitor experience by increasing the vegetative cover between sites. Access to the beach in this immediate area will be limited to visitors staying at the campground. A group campground for approximately 80 people will also be developed in the area to help accommodate the demand for group facilities. A new 50-site hike-in campground will be developed in the Burnham Woods area.

Sleeping Bear Dunes National Lakeshore does not have an approved interpretive prospectus or plan. As a supplement to the 1979 *General Management Plan*, an "Interpretive Resource





## REGION

GLEN HAVEN AREA  
SLEEPING BEAR DUNES NATIONAL LAKESHORE • MICHIGAN

U.S. Department of the Interior • National Park Service





**NORTH**



## VICINITY

**GLLEN HAVEN AREA**  
**SLEEPING BEAR DUNES NATIONAL LAKESHORE • MICHIGAN**  
 U.S. Department of the Interior • National Park Service

Base" was prepared (NPS 1979b). It provides detailed recommendations for interpreting the park's resources, including the Glen Haven area, and was reviewed during the development concept planning process.

The *General Management Plan* also proposes that a new docking facility for public boat service to the Manitou Islands and launching ramps for private boats be constructed somewhere between Port Oneida and Empire. The site was to be selected through a suitability/feasibility study, which began in 1981, and Glen Haven was one of several sites evaluated (NPS 1984a). Based on extensive technical data and public input, the National Park Service (NPS) decided in 1985 not to develop a mainland docking facility in the national lakeshore.

In 1982 a special history study of the Glen Haven village was undertaken to provide information for area interpretation, as well as data to develop a National Register of Historic Places inventory/nomination form. The village was accepted to the national register as a historic district on June 24, 1983. The NPS history study, entitled *D. H. Day's Kingdom*, was approved in February 1984.

A *Draft Development Concept Plan / Interpretive Prospectus / Environmental Assessment* was issued for public review in June 1987.

## PURPOSE OF THE DOCUMENT

This final *Development Concept Plan / Interpretive Prospectus* presents the NPS proposal for use, development, and interpretation of the Glen Haven area for the next 10 to 15 years or longer. The plan updates, amends, and expands the general concept presented in the 1979 *General Management Plan*, and it gives more specific proposals for facility construction and interpretive media, including priorities and cost estimates.

## PLANNING ISSUES

### Cultural Resources

As stated in the 1979 *General Management Plan*, the Glen Haven village atmosphere will be preserved, and buildings in the village and at the Coast Guard (lifesaving) station will be adapted for interpretation, food service, craft sales, and management. That plan does not specify whether building exteriors and the historical landscape will be preserved as they are or restored to an earlier period. The Coast Guard station has been adapted for maritime interpretation, and actions have been taken to adapt the fruit cannery building for a boat museum (see Existing Conditions maps). Some buildings in the village, such as the Sleeping Bear Inn, have had limited exterior preservation treatments but are not currently used. Other buildings, such as the D. H. Day store, are still privately used under agreements with the former owners. When these agreements expire, the buildings will be vacated, and maintenance will become the responsibility of the Park Service. Unused structures have deteriorated because funding for maintenance has been inadequate. Costs will rise further as use-and-occupancy agreements expire. A specific strategy for the use (or nonuse) of structures, as well as the treatment of the historic structures and landscape, is needed to guide park maintenance, development, interpretation, and funding decisions.

# EXISTING CONDITIONS / LAND STATUS

## GLEN HAVEN AREA

SLEEPING BEAR DUNES NATIONAL LAKESHORE • MICHIGAN

U.S. Department of the Interior • National Park Service



634 • 40076d • DSC • JUNE 93

FEDERAL LAND



SCENIC AGREEMENT

USE-AND-OCCUPANCY  
AGREEMENT



LIFE ESTATE

PRIEBE  
HOUSE

NARROW GAUGE RR TRACE

ALLIGATOR  
HILL

M-109

HILL

M-109

M-209

SEE VILLAGE -  
EXISTING  
CONDITIONS  
MAP

CAMPGROUND  
MAINTENANCE  
BUILDING

D.H. DAY  
CAMPGROUND

AMPHITHEATER

LOG  
CABIN  
SHELTER

TRAILHEAD

MUSEUM  
PARKING

COAST GUARD STATION  
(MARITIME MUSEUM)

SLEEPING BEAR ROAD

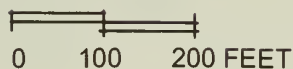
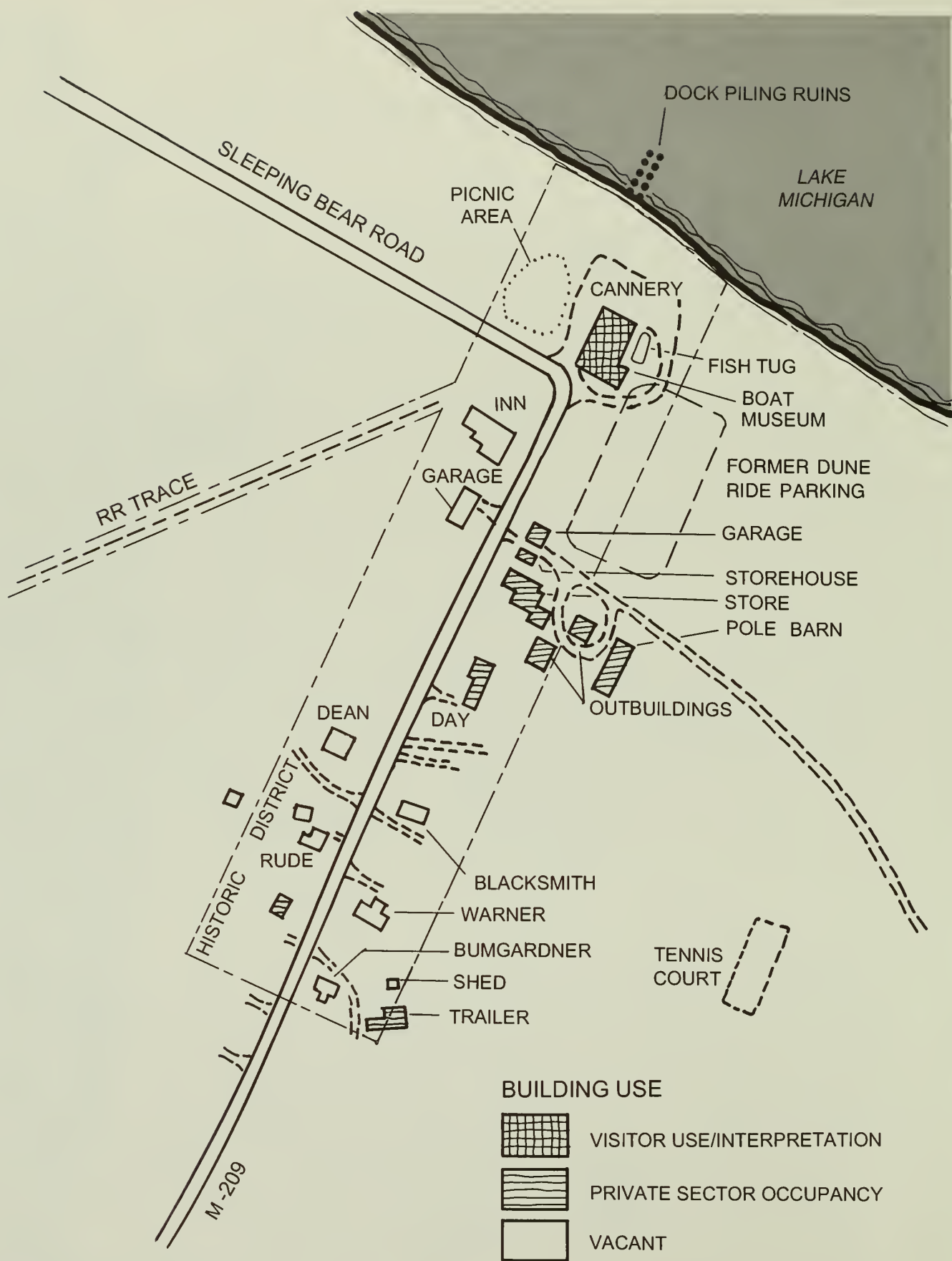
PICNIC  
AREA

VILLAGE

MICHIGAN

LAKE





## VILLAGE – EXISTING CONDITIONS

GLEN HAVEN AREA

SLEEPING BEAR DUNES NATIONAL LAKESHORE • MICHIGAN

U.S. Department of the Interior • National Park Service

643 • 40080d • DSC • APRIL 93

## Visitor Use and Interpretation

Although use has increased somewhat in recent years, Glen Haven has not yet become the major tourist attraction anticipated in the 1979 *General Management Plan*. The area still has the potential to become an important regional attraction. As mentioned above, the Coast Guard station has been adapted for regional maritime history interpretation, and the cannery is being adapted for a boat museum to supplement the maritime interpretation theme. Even though future visitor use levels are difficult to predict, updated projections are needed to guide management and development decisions. Other interpretive themes identified for Glen Haven in the *General Management Plan* — logging, agriculture, and recreation — are not sufficiently presented at Glen Haven.

As proposed in the *General Management Plan*, campsite density at the D. H. Day Campground has been reduced. However, this was accomplished by removing selected sites, lowering the total capacity from 124 to 88. The intent of the plan was to retain the original capacity through redesign and expansion. The campground regularly fills during the busy summer season, resulting in some visitors being turned away. In 1980 a new campground design was prepared, but implementation was deferred pending the outcome of the docking facility study discussed above.

Other visitor facilities proposed in the *General Management Plan*, such as trails and picnic areas, have been reevaluated, and updated proposals have been incorporated into this document.

## Access and Circulation

The *General Management Plan* proposals for restricting private vehicles in Glen Haven and for providing parking, a new road, and a public transportation system have not yet been implemented. These concepts are major elements that need to be reevaluated and updated to reflect new visitation projections, cost concerns, and current park management needs. Existing village parking is poorly defined, and the capacity is insufficient during heavy use periods. Visitors park along road shoulders and in private drives or pull off on the grass. As guaranteed by land protection documents, access must be ensured for private lands and for use-and-occupancy reservations during the terms of the agreements.

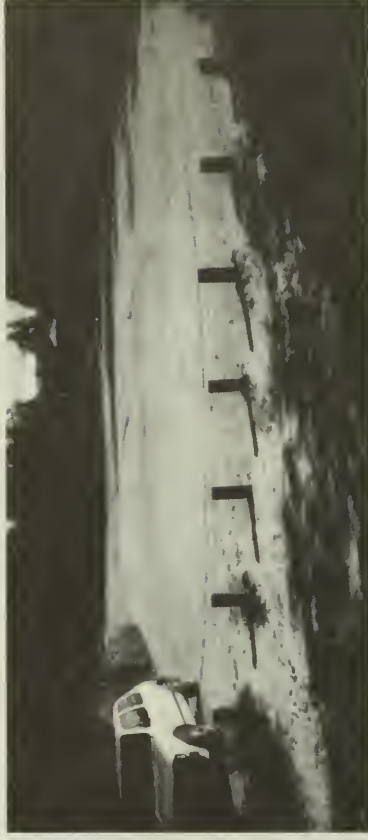
Since the *General Management Plan* was completed, funding for public transportation systems in national park system units has been reduced. That plan proposed a feasibility study to determine costs and other factors. The feasibility study was completed in 1986, and a more definite direction is set by this document for the next 10 to 15 years.



Lake Michigan shoreline at Glen Haven



Coast Guard station/maritime museum complex



Sleeping Bear Point trailhead



Existing picnic area near cannery



Coast Guard station main building





Glen Haven



Glen Haven Village



Store garage, storehouse, and D.H. Day store



Sleeping Bear Inn



Sleeping Bear Inn garage





D.H. Day store



Store outbuilding 2



William Day house



Store outbuilding 1



Pole barn



Dean house



Cannery



Fish tug next to cannery



Warner house



Bumgardner house



Blacksmith shop



## DESCRIPTION OF THE AREA

### REGIONAL SETTING

Sleeping Bear Dunes National Lakeshore is in the five-county Grand Traverse Bay region of Michigan, an area of diverse recreational resources that is attracting more vacationers and summer as well as year-round residents. Traverse City, 20 miles east of the lakeshore, provides the majority of transportation (air and bus) and visitor services for the region.

Access to the mainland portion of Sleeping Bear Dunes is by way of U.S. 31 and M-22 from the south, M-72 and U.S. 31 from the east, and M-22 from the north (see Vicinity map). M-22 traverses the length of the national lakeshore. North and South Manitou islands are seasonally accessible by boat from Leland, which is 5 miles north of the lakeshore boundary. Launching sites and docking facilities for private boats are in Frankfort and Leland.

### HISTORY

The Sleeping Bear Point Coast Guard station was originally constructed by the U.S. Life Saving Service near the point in 1902. In 1931 the buildings were moved to their present location by the Coast Guard because of shifting sands. The station consists of a dwelling, two boathouses, a steel signal tower, and a washhouse. Boathouse 2 was converted to a garage in 1931 when the move took place. The station was used until 1942. The station's crew never had to contend with a major maritime disaster or make any major rescues. A few minor rescues and other general assistance were performed, but the crew spent most of its time doing routine housekeeping chores, drills, and maintenance work. In 1970 the station became part of the national lakeshore, and on April 26, 1979, it was placed on the National Register of Historic Places. It was judged to have statewide significance.

The history of Glen Haven was dominated by the personality of David Henry Day. Only a few of the remaining structures were built before Day's arrival in 1878. The Sleeping Bear Inn, for example, is reputed to have been built in 1857. Nevertheless, the inn and other buildings took on the imprint of Day's forceful management after he arrived as the operations manager for the Northern Transit Company. By 1881 Day had bought out the company holdings at Glen Haven while still maintaining a working relationship with the company.

Day's achievements at Glen Haven include supplying cordwood for Great Lakes steamers, logging timber for lumber, providing a stopping place for travelers on the lakes and for settlers on the Michigan mainland, and beginning an agricultural system that finally evolved into the successful cherry-growing/fruit-farming business of northwest Michigan. From a national perspective, Day's endeavors best illustrate the major NPS history themes of business and agriculture (NPS 1987b), for he was functioning as an industrialist who used the latest technologies for cutting timber either for cordwood or lumber; running a sawmill to prepare the lumber for export; moving the finished lumber by rail and locomotive to his dock for transport to the major U.S. markets, principally Chicago; beginning an agricultural establishment that at first engaged in dairying and raising stock; and finally moving into fruit horticulture and resort development. The resort burgeoned after Day's death in 1928, and together with a cherry cannery, thrived until after World War II. Sleeping Bear Inn was a resort facility until 1972.

## **NATURAL RESOURCES**

### **Geology/Topography**

Geologic processes sculpted the upper Great Lakes region of Michigan, Wisconsin, and Minnesota. The most evident examples are glacial remnants of the last great ice ages — moraines, lakes, and drainage channels. Although the post-glacial lake formations are not highly visible, they illustrate an important part of the geological story. The processes that are changing the landscape today include the gradual filling of bays, the erosion and accretion of beaches, the wearing away of headlands, and the formation of sand dunes, such as the Sleeping Bear Dunes.

### **Sand Dunes**

Sand dune preservation was one of the primary reasons that the Sleeping Bear area was designated a national lakeshore. The Sleeping Bear Dunes, just west of Glen Haven, are the largest dune complex in the lakeshore. Under Michigan's Sand Dunes Protection and Management Act, much of the active dune area in the national lakeshore is a designated sand dune protection area.

### **Soils**

Except for some areas of muck, the soils in the park are generally sandy, well-drained, and very susceptible to erosion, especially in areas where vegetation has been removed by strong offshore winds. Steep slopes also increase soils' vulnerability to erosion.

In the Glen Haven study area most soils are well drained, nearly level to gently sloping, and sandy in texture. Small areas of muck soils occur in low areas. No soil types have been designated as prime or unique farmland by the Soil Conservation Service.

### **Climate**

Climatic conditions along the Lake Michigan shoreline have a pronounced influence on resource management and visitor use. Blowing sand, cold winter winds, moisture, and fog all have a strong influence on plants and animals, the visitor experience, and the types of facilities that can be provided.

Extreme seasonal temperature variations and a fairly even annual distribution of precipitation are typical of the Upper Great Lakes region. However, climatic conditions near the lakeshore are primarily influenced by Lake Michigan, which has a stabilizing effect on air temperatures. Because of the prevailing westerly winds, winters are milder and summers are cooler along the shoreline than in the interior. This moderating effect on shoreline air temperatures results in a growing period of 150 days for agricultural crops, compared to only 100 days a few miles inland.

## Vegetation

The most common natural vegetation types in the lakeshore are beech/maple and aspen/pine/oak forests. Beach and active dune, heath, and wetland vegetation types are most sensitive to human use. Types present in the study area include beach and active dune, heath, transition zone, and pine/oak/aspen forest. In general the sensitivity of vegetation to human use decreases with distance from the lake. All associations are sensitive to wind erosion if vegetation is disturbed. The forest vegetation type is the least sensitive because the trees act as windbreaks, and the denser vegetation provides more stability.

Extensive populations of Pitcher's (dune) thistle (*Cirsium pitcheri*) occur along the shoreline near Glen Haven. Pitcher's thistle was listed as a federally threatened species following release of the draft plan/environmental assessment in June 1987. Formal consultation in accordance with section 7 of the Endangered Species Act has been conducted with the U.S. Fish and Wildlife Service (see "Legal Compliance/Consultation," page 33).

## Floodplains and Wetlands

No streams or rivers are in the Glen Haven area. According to a 1977 report by the U.S. Army Corps of Engineers and the Flood Insurance Administration's 1977 flood hazard boundary maps, the 100-year Lake Michigan elevation is 582.4 feet (International Great Lakes Datum), and the 500-year elevation is 583 feet; no structures at Glen Haven are within these floodplains. Wave run-up should add less than 2 feet to these levels (U.S. Army Corps of Engineers, personal communication 1986). Record-high levels were set for Lake Michigan in 1986. The previous all-time record high of 581.0 feet set in July 1974 was exceeded in October 1986 by a monthly average of 581.63 feet. These record levels resulted in beach erosion near the cannery and groundwater infiltration into the basement of the Coast Guard station.

The National Wetlands Inventory includes two small wetland areas in the pine/oak/aspen forest and transition zone between the Sleeping Bear Dunes and M-209.

## Wildlife

The largest mammal in the vicinity of the national lakeshore is the white-tailed deer. Common smaller species include raccoon, porcupine, snowshoe hare, cottontail rabbit, red fox, woodchuck, striped skunk, mink, and a variety of squirrels.

Bird life is abundant. Common species in the morainal plateau areas and active dunes are vesper sparrow, horned lark, goldfinch, and marsh hawk. In hardwood forests the red-eyed vireo, redstart, and ovenbird are common. Shorebirds, grebes, herons, ducks, rails, and loons are found in shore areas, marshes, and swamps.

The bald eagle (*Haliaeetus leucocephalus*), a federally listed threatened species, and the peregrine falcon (*Falco peregrinus anatum*), a federally listed endangered species, are occasionally reported in the Sleeping Bear area, but no nesting occurs there. Bird species experiencing regional population declines or range diminution include four hawks (sharp-shinned, Cooper's, red-shouldered, and marsh) and the osprey, American kestrel, and yellow and



common yellow-throated warblers. The beaches near Glen Haven are potential habitat for the piping plover (*Charadrius melodus*), a federally listed endangered species, although nesting has not been observed for several years.

## **Fish**

Seventy-six fish species have been reported in the national lakeshore vicinity. Of these, about 34 species are found in Lake Michigan, and the remainder inhabit inland lakes and streams. The most important sportfish are coho and chinook salmon, rainbow and brown trout, and rainbow smelt. In Sleeping Bear Bay, which includes the Glen Haven area, large schools of juvenile alewife, spottail shiner, longnose dace, and several young lake herring (listed by Michigan as a threatened species) have been observed.

## **Air and Water Quality**

Sleeping Bear Dunes National Lakeshore is a class II air quality area. This means that it is in a clean air region where air quality is better than the applicable national air quality standards, and good air quality maintenance is an intermediate priority. Deterioration to specified increments over baseline concentrations is permitted. Measurements from an EPA/state-sponsored air quality monitoring station at the lakeshore's former visitor center about 4 miles south of Glen Haven indicate generally low pollution levels at the park. However, high acid rain levels are occasionally recorded.

Lake Michigan waters in the vicinity of the national lakeshore are considered to be of high quality (personal communication, David Kenaga, Michigan Department of Natural Resources, December 12, 1981).

## **Visual Quality**

The Glen Lake area has more geologic features than any area in the national lakeshore, ranging from wave-cut bluffs and a classic perched dune to a glacial drainage channel outwash fan and symmetrical kettle. The vegetation includes the largest old field juniper in the national lakeshore and a relic (or ghost) cedar forest. From higher areas of the lakeshore one can see Glen Lake, the Manitou islands, South Fox Island, Sleeping Bear Dunes, Sleeping Bear Bay, and Lake Michigan.

## **CULTURAL RESOURCES**

### **Archeological Resources**

Several archeological reconnaissance surveys were made in the study area in 1981 and 1982 by the Midwest Archeological Center. Areas surveyed include west of the village, between the village and the campground, and at the Coast Guard station. A survey was also done around the Sleeping Bear Inn in 1991. West of the village the survey identified several historic dump sites, recent cultural debris such as broken china and pottery, a historic railroad grade (ca.

1907), the historic Pine Street alignment, and the routes of the old telephone lines to the Coast Guard station and the Manitou islands. Archeological remains of a dock, roundhouse, barn, and other outbuildings are also likely. In the area between the village and the campground the survey found several small dumps, scattered historic artifacts, the remains of a historic ice-skating rink/curling court, tennis courts, and the historic alignment of Pine Street. Remains of a former slaughterhouse, outbuildings, and an early 20th century American Indian community are also believed to be in the area. In 36 shovel tests at the Coast Guard station nothing of consequence was uncovered, probably because of the extensive landscaping efforts undertaken by Coast Guard personnel during the active life of the station.

Because of extremely poor ground surface visibility in much of the area surveyed, the survey teams have recommended that intensive, systematic shovel testing be conducted before construction at any site, and that monitoring be done during construction.

### **Historic Resources**

The Sleeping Bear Inn was listed on the National Register of Historic Places on September 6, 1979. The Glen Haven Village Historic District (including the inn) was listed on the national register on June 24, 1983. The national register listing was revised on April 19, 1990. The inn and the village historic district were rated as having state significance. The inn is significant because it was the first structure in Glen Haven and is a fine example of a frontier hotel. Glen Haven is significant because it is an excellent example of a frontier company-operated steamboat stop, one that was vital to the growth and economic well-being of the Leelanau County area.

The Sleeping Bear Point Life Saving (Glen Haven Coast Guard) Station was also listed on the national register in 1979, with a state level of significance because of its architecture, site integrity, and relationship to a national system of navigational aids.

The log cabin/shelter in the D. H. Day Campground may be eligible for listing on the national register, but it has not yet been evaluated for significance.

For a complete list of the historic structures on the national register in the study area, see table 1.



TABLE 1: GLEN HAVEN HISTORIC STRUCTURES

NAME	NUMBER	DATE BUILT	TYPE	APPROX. SIZE (SQ FT)	CONDITION	CURRENT STATUS
Sleeping Bear Inn	HS 25-106A	1857	Two-story frame, clapboard siding, gable roof	6,000	Fair	Federal/vacant
• Garage	HS 25-106B	1928	Two-story frame, clapboard siding, gable roof	2,400	Fair	Federal/vacant
D. H. Day Store	HS 25-121A	1865	Two-story frame, clapboard siding, gable roof	2,000	Good	Private use/occupancy till 11/27/93
• Storehouse	HS 25-121B	c.1910	One-story frame, clapboard siding	340	Good	Same as above
• Garage	HS 25-121C	mid-1910s	One-story frame, clapboard siding	820	Fair	Same as above
• Warnes Blacksmith Shop	HS 25-121D	c.1860	Two-story frame barn, vertical siding, gable roof	900	Good	Federal/vacant
D. H. Day Sawmill Site	No longer extant	1868	Unknown	NA	NA	NA
D. H. Day Narrow-Gauge Railroad	Mostly obliterated	c.1880	Earthwork roadbed 10' wide	NA	Deteriorated	Right-of-way private
William Day House	HS 25-118	c.1890	Two-story frame	2,300	Good	Private use/occupancy till 12/1/92
Bumgardner House	HS 25-122	c.1890	1-1/2 story frame, T-shaped, clapboard siding	1,350	Fair	Federal/vacant
Warner House	HS 25-114	c.1898	1-1/2 story frame, clapboard siding	1,100	Fair	Federal/vacant
Rude House	HS 25-107	Late 1800s to early 1900s	One-story frame, clapboard siding, gable roof	630	Poor	Federal/vacant
• Garage	NA	1953	One-story frame, asphalt shingle siding, gable roof	360	Poor	Federal/vacant
Fruit Canning Factory	HS 19-153A	mid 1920s	One-story frame, metal shed roof, formed metal siding	3,000	Fair	Federal boat museum
Wickland House (Rude)	NA	1947	One-story frame	860	Good	Private use/occupancy till 4/1/02
Dean House	HS 25-106	1952	One-story frame	900	Good	Federal/vacant
Sleeping Bear Point Lifesaving Station						
• Dwelling	HS 19-121A	c.1902	1-1/2 story frame	4,000	Good	Federal/maritime museum
• Boathouse/Garage	HS 19-121B	c.1902	One-story frame	1,000	Good	Federal/restrooms
• Boathouse	HS 19-121C	c.1902	One-story frame, board-and-batten siding	1,300	Good	Federal/maritime museum
• Fire Cache/Shed	HS 19-121D	c.1902	One-story frame, horizontal wood siding	200	Good	Federal
• USCG boat	HS 19-121E	c.1902	NA	NA	Poor to fair	Federal
• Tower	HS 19-121F	1914	Steel	NA	Good	Federal

## VISITOR USE

Recreational visits to Sleeping Bear Dunes National Lakeshore varied between 1978 and 1987, with no consistent trend of increase or decrease. This relative stability may be because 70% of the visitors are Michigan residents. Visitation is also highly seasonal, with peak use in July and August.

There are no annual visitor use statistics for the Glen Haven area. The maritime museum in the Coast Guard station was opened to visitors in 1984; about 30,000 visits were recorded in 1985, 59,700 in 1986, and 38,500 in 1987.

Based on the figures in table 2, average daily visitation during July and August has been estimated at about 1,000 people. Comparing the visitor counts at each of the three sites to the total count, approximately 63% of the visitors go to the maritime museum, 11% use the trailhead, and 26% stop at the cannery/village area. Translating the percentages into peak use daily averages, about 630 people go to the maritime museum, 110 people use the trailhead, and 260 people go to the cannery/village area. As facilities, programs, and activities are developed at Glen Haven, the percentage of visitation to the village can be expected to increase significantly.

Assuming that about the same number of people will visit the village as visit the maritime museum, and assuming a 2% per year increase in visitation at the Glen Haven area, a projected 1,800 people per day may come by the year 2005. Because these estimates are not based on substantiated data, it will be important to reevaluate them as visitation patterns are established in the area.

## EXISTING DEVELOPMENT

Access to Glen Haven is provided by M-209, a paved two-lane road. From the cannery west to the Coast Guard station, the road is designated as Sleeping Bear Road, a county road.

Little designated parking is available at Glen Haven. An area around the cannery provides informal, unpaved parking for a few vehicles; visitors also park alongside the road. Signs, parking, and pedestrian access are inadequate, and first-time visitors experience a certain amount of confusion when they arrive at the village. Visitor use at the maritime museum in the

**TABLE 2: NUMBERS OF VEHICLES AND VISITORS AT THREE GLEN HAVEN PARKING AREAS, JULY-AUGUST 1985**

		<u>VEHICLES</u>	<u>VISITORS</u>
Maritime Museum	July	3,660	21,220
	August	6,160	20,330
Dunes Trailhead	July	860	2,860
	August	1,400	4,660
Cannery	July	3,440	11,200
	August	1,850	6,350

Coast Guard station, however, is well organized, with signs, parking (20 cars/2 buses), pedestrian access, and visitor restroom facilities. A nearby one-lane, two-way road leads to a trailhead for the dunes near Sleeping Bear Point (see Existing Conditions map).

The cannery, inn, blacksmith shop, and Warner house in the village are open to visitor use only when guided tours are given. The cannery is being adapted for a boat museum. Two vault toilets are nearby. The beach is open to the public, and about six picnic tables are in a grassy area adjacent to the cannery.

The D. H. Day Campground has 88 sites, an amphitheater, a water system, vault toilets, and gravel roads. The campground fills nightly in July and August. Many visitors return year after year and consider the campground a traditional part of their vacation experience.

Based on the visitation counts for the Coast Guard station, dunes trailhead, and cannery, and using an average of 3.3 people per car, the number of cars per day during July and August is estimated at 190 at the station, 33 at the trailhead, and 78 at the cannery. Adjusting for average lengths of stay (one hour each at the Coast Guard station and cannery and four hours at the trailhead), an estimated 25 parking spaces are currently needed at the Coast Guard station, approximately 20 spaces at the trailhead, and about 20 spaces at the cannery/village area. Based on projected visits, parking needs may increase to 35 spaces at the Coast Guard station, 30 spaces at the trailhead, and 45 spaces at the village by the year 2005.

## **THE PLAN**

### **OBJECTIVES**

Preserve the cultural landscape and interpret the history of the Glen Haven area.

Protect natural resources in the area, including the sand dunes, endangered species habitat, wetlands, and other critical resource elements.

Reduce or control vehicular traffic in the village to preserve the historical scene, increase pedestrian safety, and enhance the visitor experience.

Provide opportunities for recreational activities consistent with natural and cultural resource protection needs.

Stimulate interest in regional maritime and other appropriate history themes for the area.

Demonstrate the interrelationship between the region's natural resources and cultural history.

### **INTERPRETATION**

The interpretive significance of the Glen Haven village is that it represents a typical, small, company-operated frontier cordwood station/steamboat stop. These types of stations developed around the turn of the 20th century along the shores of the Great Lakes, especially northeastern Lake Michigan. Typical of the entrepreneurial businessmen who owned and dominated the commercial and social life of these lakeshore communities was D. H. Day, one of the key figures in Glen Haven's history.

Over time the lakeshore communities engaged in numerous commercial enterprises — lumbering, fishing, fruit growing and processing, and tourism — using various regional resources to maintain an economic livelihood. To support these enterprises, the towns typically included a company store, a company boardinghouse and hotel, company-owned and private homes, warehouses, a blacksmith shop, a tramway for lumber products, a sawmill, a dock, and a company farm. Of these customary structures, all but the sawmill, dock, and warehouses remain in the Glen Haven area. The sawmill is gone, but the mill pond remains, the old dock pilings are visible at times, and a trace of the narrow gauge railroad can be found. The Glen Haven cannery is typical of many fruit-processing plants that developed in the region after the lumber era.

The Glen Haven village buildings and landscape will be preserved and maintained. As stated in the revised listing for the National Register of Historic Places, Glen Haven's period of significance is from 1857 to 1939. Alterations to the buildings and landscape since this period have been minor; the primary treatment proposed for resources is preservation.

Overall restoration of the village, including the reconstruction of historic structures, is not essential for the public understanding of the area and is not supported by policy. However, the restoration of specific building components or landscape features to replace those that are



architecturally incompatible and nonhistoric, may be undertaken when supported by adequate evidence.

The Glen Haven story is one of establishment, growth, transition, and decline. The different stages of development will be interpreted through publications, historic photographs, exhibits, and onsite personal services. Preservation treatments for the buildings and landscape will be identified in historic structure reports and cultural landscape reports, as appropriate. Primary elements of the interpretive program at Glen Haven will include the following:

Orientation to the Glen Haven area — its significance and how to best see the area

Story of the industries — shipping, fishing, logging, agriculture, and tourism; broad-based uses of resources to maintain economic stability

Story of life in the company town

Story of D. H. Day and his empire

Glen Haven has been designated as having a state level of significance on the revised national register listing. Maritime commerce is the primary area of significance. Logging history, agriculture, tourism, and Great Lakes fishing are also part of the Glen Haven story. Glen Haven is a pleasant place to visit and one of a group of complementary experiences in the general vicinity — the dune climb, Sleeping Bear Point hiking trails, beach use, camping, and the maritime museum.

Various structures, a self-guiding folder, and wayside exhibits will be used to interpret the primary story elements and to provide information/orientation about how to visit the Glen Haven area. Interpretive media will be provided that can function with or without staffing. A separate visitor contact/interpretive station is not proposed for the village.

## **VISITOR USE AND DEVELOPMENT**

The general concept for visitor use and development is to provide cost-effective facilities and media to achieve interpretive objectives, to provide the desired visitor experience, to encourage adaptive uses, and to accommodate the anticipated increase in visitation while preserving the area's historical appearance and natural integrity. Historic structures will be adaptively used for interpretive, private, and administrative purposes.

### **Village Access, Circulation, and Parking**

The long-range concept for village access, circulation, and parking is to provide facilities appropriate to visitation levels and to minimize the impact on cultural and natural resources. Ultimately, a new access road may be developed around the historic district to a central 44-vehicle parking area approximately 300 feet west of the village (see the development concept map for the village). Handicap parking spaces and a hard-surfaced trail will ensure that all visitors have access to the village. A general orientation wayside exhibit with self-guiding folders will be provided at the parking area. Near the cannery visitors will be directed

to an interpretive wayside for information about the lake/village interface; the optimum site is near the former dock (the traditional entrance to the village), where the entire village can be seen.

The existing stretch of M-209 in the village will be made a secondary one-way road for slow-speed local traffic, visitor drop-off, and pedestrian circulation. As shown on the development concept maps, traffic will flow in the direction of Lake Michigan. This proposal will require the concurrence of the Michigan Department of Transportation. The stretch of Sleeping Bear Road from the cannery west, approximately 800 feet, will also be made one-way, with the concurrence of the Leelanau County Road Commission. The new road alignment around Glen Haven will enhance the historical scene and reduce vehicle/pedestrian conflicts in the village while ensuring access to private lands in the area. Careful road and parking area design will minimize adverse impacts to the historical scene near the village.

The long-range concept will be phased, with each phase being implemented as needed. Phase one will include a village parking area in the former dune ride parking area between the cannery and the store to replace the existing informal parking that occurs around the cannery. The new village parking area will be subject to the following stipulations: (1) the capacity will be limited to 40 cars, including oversized vehicles; (2) the surface appearance will be as it was during the dune ride period (gravel, stabilized turf, or Grasscrete, as appropriate); (3) parking barriers will be nonintrusive and the minimum size needed to define the lot and prevent parking on adjacent areas; (4) any screen plantings will be consistent with the type of vegetation found there during the period of significance; (5) the capacity will not be expanded in the future; and (6) if the long-range road and parking concept (discussed above) is implemented, this parking lot may be removed.

Phase two parking improvements will be implemented after the Sleeping Bear Inn is leased. A 20-car/2-bus parking area will be developed at a site southwest of the Sleeping Bear Inn, in one of the areas specified for long-range parking needs (see the development concept map for the village). However, access will be through the village off M-209.

Phase three improvements will be implemented only if increased village traffic and parking needs warrant a more significant solution. The access road around the village will be constructed, and a second 20-car/2-bus parking area will be developed (see the development concept map for the village). At that time, the parking area at the former dune ride site may be removed, along with direct access off M-209 to the parking area near the Sleeping Bear Inn (phase two).

The 1979 *General Management Plan* recommends redesigning the M-109/209 intersection. This development concept plan includes a development concept for consideration by the state (see the development concept map for the Glen Haven area). The proposal is to make the primary route (M-109) a continuous through-road, with M-209 as the secondary road.

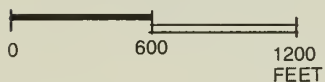
A visitor transportation feasibility study for the Glen Haven area was completed in 1986 and published in the *Draft Development Concept Plan / Interpretive Prospectus / Environmental Assessment*. A shuttle system is not proposed in this plan because visitation will probably not be sufficient to support such an operation. Under this plan parking areas will be available at the village, near the beach, at the Coast Guard station, and at the dunes trailhead, with capacities sufficient to accommodate expected use for the next 10 to 15 years. This strategy

# DEVELOPMENT CONCEPT

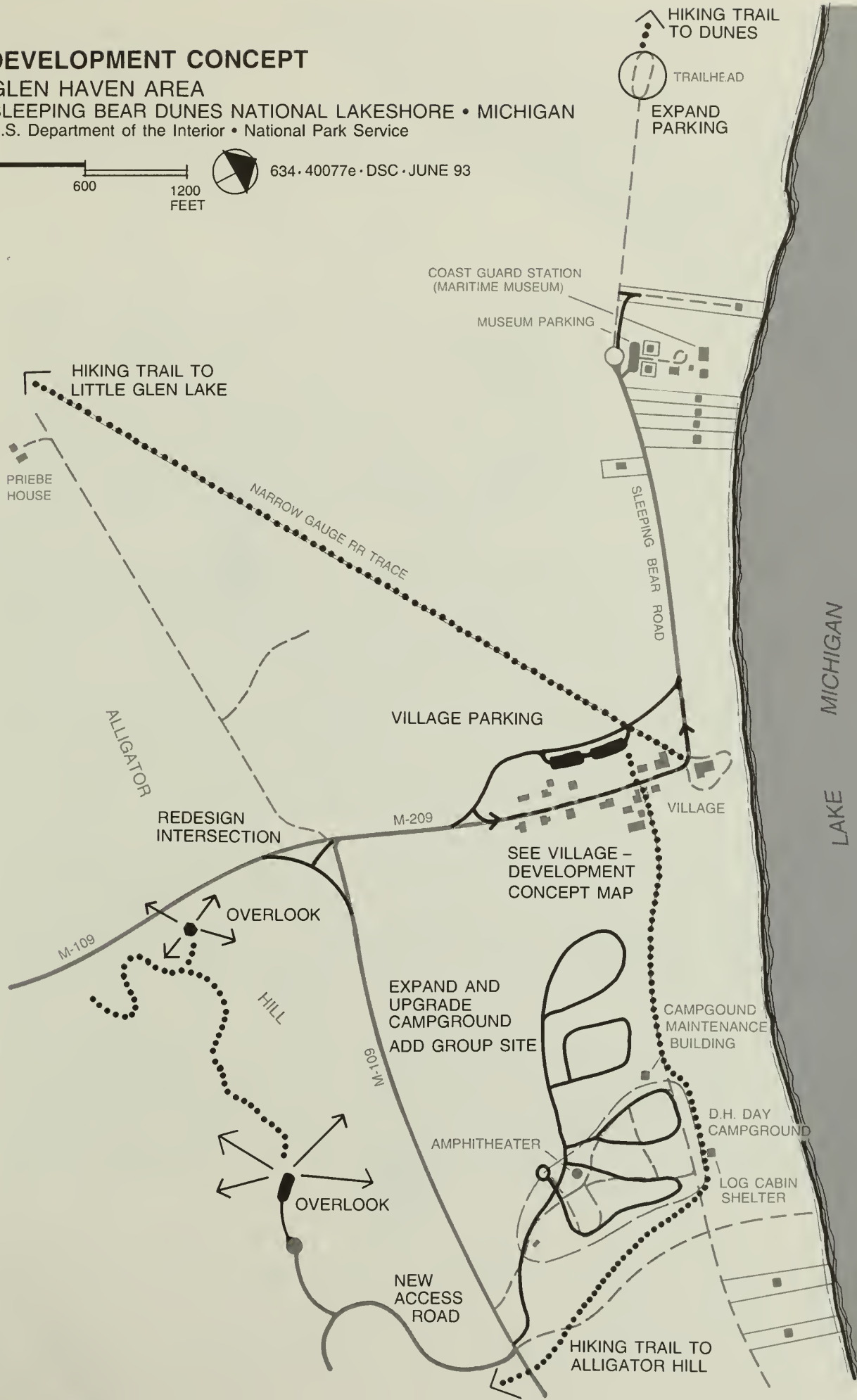
## GLEN HAVEN AREA

SLEEPING BEAR DUNES NATIONAL LAKESHORE • MICHIGAN

U.S. Department of the Interior • National Park Service



634.40077e • DSC • JUNE 93





postpones development of a large (200+ car) parking area, but does not preclude options for a shuttle system in the future if use levels exceed projections. The Park Service will encourage the expansion of the county public transportation system to serve Glen Haven and other nearby activity areas in Sleeping Bear Dunes National Lakeshore.

## **Interpretive Facilities**

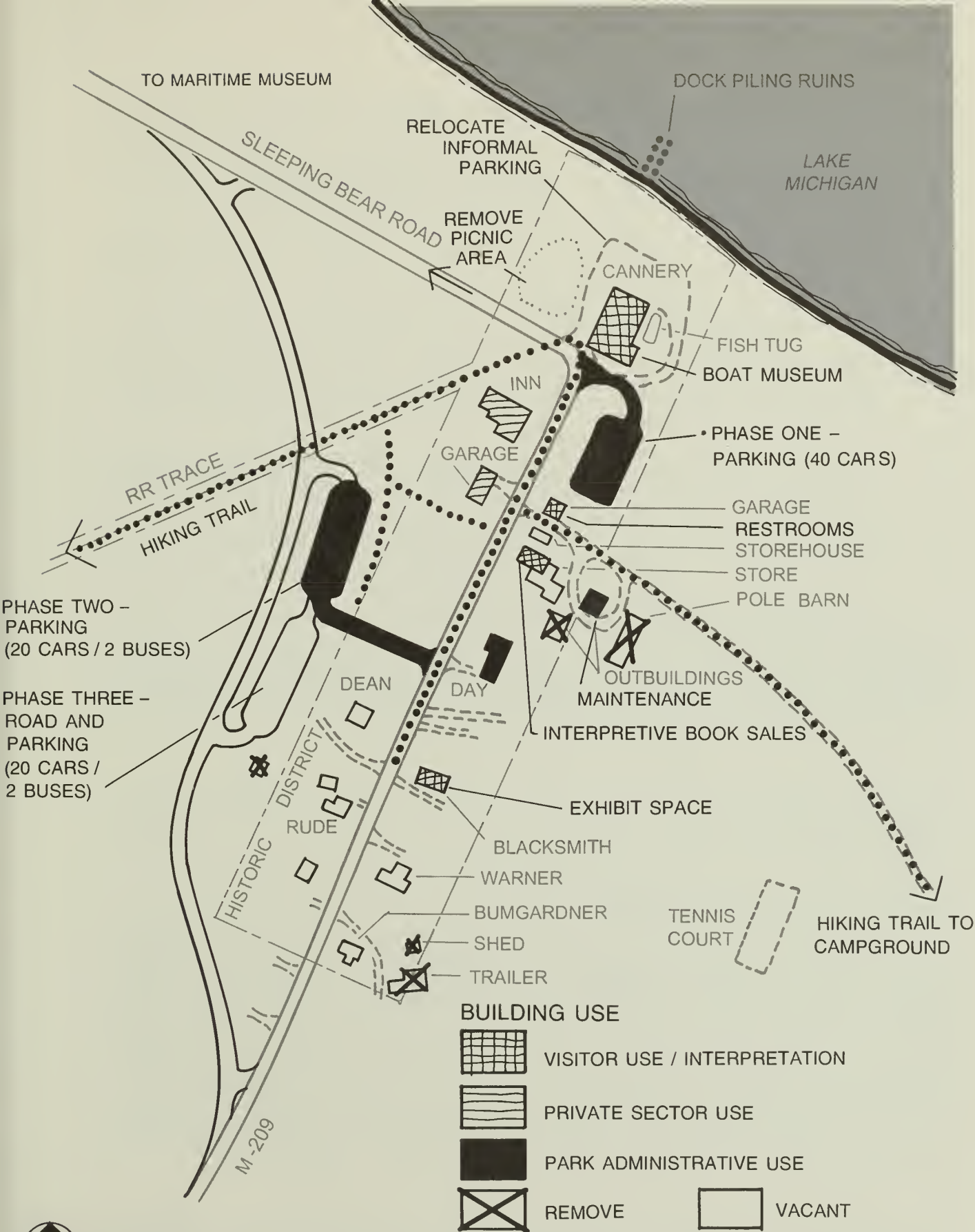
The fruit cannery building will continue to be used as a boat museum because it offers a large open space to display boats and because Glen Haven has historic ties to maritime industries on the Great Lakes. A series of exhibit panels will be created to augment interpretation of the boats. A few maritime artifacts may be selected for museum case exhibits, but they should not become a major occupier of space because the primary use should be to display boats. The fishing equipment display, which is in a separate room, will be developed as a look-into display, and the open windows will probably be sealed with acrylic plastic. The village will be regularly staffed with a roving interpreter. One simple panel will interpret the cannery's historical use. Some work will be done to the building to provide access for disabled visitors and to seal it against weather and dirt.

The fish tug relates to the fishing theme for the area, and it will continue to be displayed at its location adjacent to the cannery. The tug should not be a dominant feature of the view, but rather an extension of the indoor boat display. An exhibit will interpret the tug, and a viewing platform will be built to allow visitors to look inside the cabin.

The blacksmith shop will be adapted for exhibit space. A floor will be installed, and objects related to historical activities, such as agriculture and logging, will be displayed. Objects with definite ties to the historic village themes will be selected for display. The shop will not be staffed. Exterior signs will identify the building as a museum exhibit, and a simple panel inside could interpret the blacksmithing function. Access for disabled visitors will be provided.

A guide for the village walking tour will be developed to supplement the existing folder series that has been prepared by the lakeshore staff. Folders in the series include one for each island, for various hiking trails, and for other features. They are attractive, have a common design, and contain text, graphics, and photographs. The park staff has a good collection of historic photographs, some of which could be used in the walking tour folder. The self-guiding folder will be available at a wayside kiosk in the parking lot. Only general orientation to the village will be given until there is demand for a longer publication.

After the use-and-occupancy agreement expires in 1993, a portion of the D. H. Day store will be used for cooperating association book sales (see the development concept map for the village). This is the only place in the vicinity that visitors will have access to such an outlet. It may be staffed by an NPS employee, volunteer, or association personnel who could also dispense park information. It will be a seasonal operation, easily opened and closed, depending on staffing availability and demand. A portion of the sales area may also serve another interpretive use, such as an exhibit area.



## VILLAGE - DEVELOPMENT CONCEPT

GLEN HAVEN AREA

SLEEPING BEAR DUNES NATIONAL LAKESHORE • MICHIGAN

U.S. Department of the Interior • National Park Service

643 • 40081e • MAY 93

Up to 10 wayside exhibits will be provided for the following information/interpretive purposes:

Visitor orientation to the village — a high-profile, perhaps multi-panel exhibit at the parking lot that includes a folder dispenser (for village walking tour) and possibly a collage of historic photos and an oblique aerial photo of the village

Village/lake interface interpretation — specifically the dock and the ships that used the area, and the islands that can be seen

Sleeping Bear Point trail orientation

Fish tug interpretation

D. H. Day farm interpretation

Village interpretation — from an overlook southeast of the village near M-109; a one- or two-panel exhibit could be used; the trail to the overlook will begin at a roadside parking area

View interpretation — from an overlook at the Quick place

Campground-to-village hiking trail orientation

In addition to these waysides, a coordinated sign system will be developed to identify the functions of various village buildings. They should blend with the historic setting. Integrated road signs are also needed for safety and adequate notice of Glen Haven features; such signs would be coordinated with the state.

The double garage north of the D. H. Day store will be converted to a public restroom for village visitors. The structure will be accessible to visitors with physical disabilities. A water and septic system will be installed.

## **Adaptive Use of Historic Structures**

The Sleeping Bear Inn and garage will be adaptively used by the private sector, if feasible, because they are not needed for visitor services, interpretive space, administration, or other park management functions. They will be advertised for lease with appropriate uses under the historic properties leasing program. These uses will be compatible with the historical use of the structure, such as a restaurant, lodge, hostel, or bed-and-breakfast operation. It is intended that the inn be open to the public and made accessible to visitors with disabilities, if feasible. If the proposed adaptive use will provide necessary and appropriate commercial services to a substantial number of park visitors, then the building may be made available under a lease, and the use may be administered through a concession contract. A request for proposals will be issued to solicit interest in leasing. Preference will be given to traditional uses.

The building interiors may be remodeled to accommodate the approved use, but exteriors will be preserved. The interior of the inn will be rehabilitated in accordance with the "Secretary of



the Interior's Standards for Rehabilitation." Small signs will identify the adaptive use, but they will be designed to be compatible with the historical scene.

If the inn and garage cannot be adaptively used by the private sector at this time, the Park Service will continue to stabilize and maintain the structures until non-NPS adaptive uses can be arranged.

At this time the Park Service has no potential administrative uses for several historic structures, and non-NPS uses have been determined undesirable for these buildings. The current plan is to stabilize and maintain the exterior of the Dean, Rude, Wickland (Rude), Warner, and Bumgardner houses as vacant interpretive displays. No adaptive uses are proposed. Detailed exterior preservation treatments will be identified in one or more historic structure reports. One or more structures may be adaptively used if there is an identified need in the future.

### **Administrative Facilities**

When the use-and-occupancy agreement for the William Day house expires in 1992, it will be used for an NPS residence in the village, consistent with the park's quarters management plan. A park ranger living in the area will help provide some protection to the structures.

Limited maintenance space is needed to support NPS operations in the Glen Haven area. A storage space for materials and work space for historic preservation activities will be provided. Because these activities can intrude on the visitor experience and the historical scene, they will be housed in a nonhistoric building just outside the historic district behind the D. H. Day store (when the use-and-occupancy agreement expires in 1993).

### **Other Structures**

Structures that do not contribute to the historical scene, including a steel pole barn and a concrete block garage behind the store, will be removed by the owner by November 1993. These structures were constructed in modern times to support the former dune ride operation. The concrete block building is cracked and has drainage problems. The pole barn is outside the historic district, is a major visual impact on the district, and was built after 1970.

A modern mobile home behind the Bumgardner house will be removed by September 2005. Other nonhistoric structures in the Glen Haven area will be removed when private use rights have expired.

The curling court and tennis court east of the blacksmith shop are not in the district but relate to the recreation theme. The curling court is in an advanced state of deterioration. Both are considered archeological resources that will be allowed to deteriorate naturally.

## Maritime Museum

The Coast Guard station will continue to be the center for maritime history interpretation. Adaptive rehabilitation, exterior treatments, interpretive exhibits, and site development are complete. Two adjacent houses (Fitzgerald and Jacklin) are under long-term use agreements until 1998 and 2002, respectively. These structures were not included in the national register nomination for the station but will be reevaluated because of their relationship to Coast Guard activities (they provided housing for families). If determined eligible, the structures' exteriors will be preserved. If the interiors of the two houses retain historic features or characteristics, they will be considered just as important as the exteriors. These items will be evaluated and treated appropriately. If not eligible for the national register, the buildings will be removed when the use-and-occupancy agreements expire.

The museum parking area is adequate but operates near capacity during the peak season. The 1979 *General Management Plan* proposes that the dunes area trailhead be combined with the Coast Guard station parking. This *Development Concept Plan* proposes retaining the museum parking at its current capacity and leaving the trailhead in its current location. Although future increases in visitor use may cause demands beyond the museum's parking capacity, it is considered to be an appropriate size for the capacity of the museum itself.

The recently completed turnaround at the end of Sleeping Bear Road has been leased to Leelanau County for 99 years and will remain unchanged. The access road to private residences west of the museum will be consolidated with the trailhead road to reduce potential visitor confusion and improve safety near the turnaround (see the development concept map for the village).

## Trails

Glen Haven area trails will be generally developed as proposed in the *General Management Plan*. A loop trail was designated in the dunes area, and the existing gravel trailhead near the dunes will be retained and expanded by 10 cars to accommodate increased use. The gravel access road will be widened to meet minimum park road standards for two-way traffic if use increases to more than 100 vehicles per day (two-way average daily traffic) during the summer.

A hiking trail along the old narrow-gauge railroad grade will connect Glen Haven to Little Glen Lake. The village parking area discussed for phase two above will serve as a trailhead. Accessible trails will provide circulation in the village and connect to the D. H. Day Campground. A hiking trail will connect the campground to the Alligator Hill area, forming a continuous trail system in the Glen Lake area, as envisioned by the *General Management Plan*.

## Campground

The D. H. Day Campground will be extensively rehabilitated and upgraded as proposed in the *General Management Plan*. The rehabilitation will make circulation easier, upgrade sanitary facilities, restore the original capacity, reduce dust, add group camping, and generally improve the camping experience. To reduce traffic through the campground, a main road and a series

of loop roads will be constructed. The entrance road will be realigned to match Stocking Drive (see the development concept map for the Glen Haven area).

The campground will be redesigned for about 125 sites (the original capacity), plus group sites for about 80 people. Paved roads, showers, and flush toilets will be provided. A water system and sewage disposal system will be developed. The type of sewage system will be determined during the campground design. A portion of the new sites and toilets will be accessible to visitors with disabilities.

The amphitheater, which is currently in the center of the campground, will be relocated to a more appropriate site. It will also be designed to accommodate persons with disabilities.

The exhibit on the history of the campground will be maintained outside the log cabin. Because the cabin has interpretive uses and may be eligible for the National Register of Historic Places, it will be preserved for use as an interpretive shelter. Interior lighting will be added to make the building more suitable for interpretive programs.

### **Beach Use and Picnic Facilities**

As discussed above, the village parking areas will continue to serve beach users. Designated trails to the beach will minimize impacts on the dunes and the Pitcher's (dune) thistle. Impacts on the thistle will be monitored and barriers installed if necessary.

The *General Management Plan* proposes a picnic area near the main parking area. This *Development Concept Plan* proposes no formal picnic area in the study area. Instead, a few picnic tables may be placed near designated parking areas outside the historic district. The existing picnic area will be removed from the village historic district.

### **Overlooks**

The *General Management Plan* proposes a developed overlook on Alligator Hill southeast of Glen Haven. This plan includes two overlooks, with a connecting trail (see the development concept map for the Glen Haven area). The sites offer excellent views of Lake Michigan, Glen Haven, and the D. H. Day farm near Little Glen Lake. They also offer an opportunity to visually tie the entire Glen Haven story together. The overlook near M-109 will be accessible only by trail. The overlook at the Quick place will be accessible by vehicle when it is developed.

The overlook site near M-109 offers the best 360° view of the entire area (with some vista clearing). A small parking area (up to 10 cars) will be provided at the base of the hill. A wayside exhibit at the parking area will interpret the D. H. Day farm. Waysides at the overlook will address the entire area. The overlook at the Quick site has good road access and has already been disturbed by residential development. A small parking area (up to 10 cars) and wayside exhibits will be provided. This overlook is a long-range proposal. The property is federal land under a life-estate agreement, which permits lifetime occupancy by the former owner. The overlook will not be developed until the residence is vacated, at which time the structures will be removed.

## **IMPLEMENTATION COSTS AND PRIORITIES**

The estimated development costs to implement the plan are displayed in table 3. The costs for remodeling the Sleeping Bear Inn for private sector use are contingent on specific uses that will be solicited through proposals under the historic properties leasing program. Those costs will be borne by the lessee.

Because of its historical significance and vacant status, the highest priority for implementation is leasing the Sleeping Bear Inn for adaptive use. A request for proposals will be issued to identify specific procedures and to formally solicit interest in the inn (including the garage).

Other high-priority items are constructing the village parking area, completing the boat museum, and installing selected interpretive waysides and signs. The restroom facility in the village is a high priority item that will be completed after the use-and-occupancy agreement expires in 1993.

The estimated annual operations cost increases are shown in table 4. Additional requirements for legal compliance, such as archeological monitoring, are identified in the following section of this plan.



TABLE 3: GLEN HAVEN AREA DEVELOPMENT COST ESTIMATES

<u>ELEMENT</u>	<u>PRIORITY/ PHASE</u>	<u>DESCRIPTION</u>	<u>COST</u>
Boat Museum	1	Adapt cannery	\$46,000
		Install text panels and case exhibits	40,000
		Build wheelchair ramp	2,000
		Build fish-tug viewing platform	4,000
Village Parking	1	Develop 40-car parking area (gravel)	43,000
		Construct access road (gravel)	7,000
	2	Develop 20-car/2-bus parking area (paved)	42,000
		Construct access road (gravel)	9,000
	3	Develop 20-car/2-bus parking area (paved)	42,000
Roads	3	Build village road (1,700 lf)	223,000
		Redesign M-109/209 intersection (1,000 lf)	131,000
Waysides	1-3	Provide eight waysides	40,000
Exhibit Building	2	Adapt blacksmith shop	27,000
		Install floor	7,000
		Build wheelchair ramp	2,000
		Provide text panels	18,000
Houses	1-3	Stabilize three houses	21,000
Association Sales	2	Adapt portion of store (400 sf)	37,000
		Furnish for sales	9,000
Village Restrooms	2	Adapt garage (816 sf)	107,000
		Provide utilities	66,000
Dunes Trailhead Parking	2	Expand existing area by 10 cars (gravel)	10,000
Building Removal	1-3	Remove 16 nonhistoric buildings throughout the Glen Haven area	20,000
Overlooks	3	Develop two 10-car parking areas	39,000
		Provide two wayside exhibits	10,000
		Build access trails	13,000
Trails	3	Build hiking trail (5 miles)	98,000
		Build paved trail (2 miles)	194,000
D. H. Day Campground	3	Redesign campground and provide 125 sites	819,000
		Provide group campground	24,000
		Obliterate/revegetate disturbed areas	66,000
		Construct entrance station	124,000
		Construct dump station	59,000
		Relocate amphitheater	66,000
Development Cost Total			\$2,465,000
Advance and Project Planning			\$ 470,000
Grand Total			\$2,935,000

Note: Development costs are gross figures that include construction, project supervision, and contingencies (1987 costs).

TABLE 4: ANNUAL OPERATIONS COST ESTIMATES

<u>DIVISION</u>	<u>PERSON-YEARS</u>	<u>GRADE</u>	<u>COST</u>
Visitor and Resource Management			
• Staffing	0.5	GS-5	\$8,500
• Supplies and materials			850
Maintenance			
• Staffing	0.4	WG-3	9,150
	0.7	WG-5	15,750
	0.1	WG-8	3,040
• Supplies, materials, utilities			11,000
Interpretation			
• Staffing	0.5	GS-7	12,000
• Supplies and materials			4,600
Administration			
• Staffing	0.1	GS-6	1,848
	0.1	GS-11	<u>3,136</u>
<b>Total</b>			<b>\$57,874</b>

Note: Salaries include 12.4% for personal benefits. These estimates reflect expenditures above existing operations costs when the plan is fully implemented.

## LEGAL COMPLIANCE / CONSULTATION

### NATIONAL ENVIRONMENTAL POLICY ACT

A *Draft Development Concept Plan / Interpretive Prospectus / Environmental Assessment* was issued for public review in the summer of 1987. Comments were received in writing and at three open house sessions (at Lansing, Traverse City, and Empire, Michigan). A finding of no significant impact (FONSI) was approved on June 9, 1988.

### ENDANGERED SPECIES

To comply with the Endangered Species Act, the National Park Service analyzed the plan's effects on listed and potential endangered species in the draft plan. The draft plan was sent to the U.S. Fish and Wildlife Service for informal consultation, and that agency concurred with the no effect determination as long as the following protective measures are implemented: Park staff should continue to monitor the beach areas for piping plover sightings and nesting sites; interpretive displays could be established to inform the public of potential piping plover habitat; and the public should be encouraged to notify park staff if a piping plover is seen.

Since the draft plan was written, the Pitcher's thistle (*Cirsium pitcheri*) has been listed as a threatened species (53 FR 27141, July 18, 1988). In accordance with federal regulations (50 CFR 402.04[h][3]) formal consultation was initiated in June 1990. The National Park Service prepared a biological assessment in April 1991. On August 15, 1991, the U.S. Fish and Wildlife Service issued a biological opinion on the final plan, concluding that the population of the Pitcher's thistle would not be jeopardized. Their opinion included some additional recommendations, several of which will be implemented by the Park Service. A separate 10-car beach use parking area that had been proposed for a site west of the cannery was dropped from the plan based on this consultation process. The biological assessment, biological opinion, and related correspondence will be reviewed during the design phase for the plan to ensure that impacts to the Pitcher's thistle are minimized.

### FLOODPLAINS AND WETLANDS

In compliance with Executive Orders 11988 "Floodplain Management" and 11990 "Protection of Wetlands," impacts on floodplains and wetlands have been avoided. None of the existing or proposed development is in the 100- or 500-year floodplain. The plan will not affect the three wetland areas in the National Wetlands Inventory for the area.

### NATIONAL HISTORIC PRESERVATION ACT

The National Park Service consulted with the Michigan state historic preservation officer and the Advisory Council on Historic Preservation about the plan's effect on resources listed on the National Register of Historic Places. Copies of the *Draft Development Concept Plan / Interpretive Prospectus / Environmental Assessment* were sent to the state historic preservation officer and the advisory council for review and comment; the "Finding of No Significant Impact" was

sent in June 1988. The plan will not affect any known prehistoric sites. However, areas to be affected by development will be shovel-tested prior to construction, and monitoring will be done during construction by a qualified historian/archeologist.

## **COASTAL ZONE MANAGEMENT**

Because Glen Haven is on the shores of Lake Michigan and the state is participating in the federal coastal zone management program, a copy of the draft plan was sent, along with a consistency determination, to the Michigan Department of Natural Resources. The plan will not adversely affect Michigan's coastal zone.



## SELECTED REFERENCES

Ayres, Lewis, Norris and May, Inc.

- 1978 "Design Report: Campground Improvements, Sleeping Bear Dunes National Lakeshore." Title 1 Report. Ann Arbor, MI. On file at Sleeping Bear Dunes National Lakeshore.

Federal Insurance Administration, U.S. Department of Housing and Urban Development

- 1977 "Flood Hazard Boundary Map. Township of Glen Arbor." Community panel no. 260604 0003A, page 3. Washington, DC.

National Park Service, U.S. Department of the Interior

- 1979a *Sleeping Bear Dunes National Lakeshore, General Management Plan*. Denver Service Center.
- 1979b "Interpretive Resource Base, Sleeping Bear Dunes National Lakeshore." Denver Service Center.
- 1979c *Assessment of Alternatives for the General Management Plan, Sleeping Bear Dunes National Lakeshore*. Denver Service Center.
- 1983 *Land Protection Plan, Sleeping Bear Dunes National Lakeshore*. Frankfort, MI.
- 1984a *Environmental Assessment for a Docking Facility, Sleeping Bear Dunes National Lakeshore*. Denver Service Center.
- 1984b *D. H. Day's Kingdom*, by Ron Cockrell. Midwest Regional Office, Omaha, NE.
- 1984c "Draft Guidelines — Visitor Transportation Systems." Washington, DC.
- 1985 *Cultural Resources Management Guideline, NPS-28*. Washington, DC.
- 1987a *Draft Development Concept Plan / Interpretive Prospectus / Environmental Assessment, Sleeping Bear Dunes National Lakeshore*. Denver Service Center.
- 1987b *History and Prehistory in the National Park System and the National Historic Landmarks Program*. Washington, DC.
- 1988 *Management Policies*. Washington, DC.

Schlabach, Kathryn M.

- 1980 "Glen Haven: Options for Development." Thesis, University of Michigan, Ann Arbor.

U.S. Army, Corps of Engineers

- 1977 *Report on Great Lakes Open-Coast Flood Levels*. Prepared for Federal Insurance Administration. Detroit District.
- 1986 "Monthly Bulletin of Lake Levels for the Great Lakes." Detroit District.

## PLANNING TEAM

### CORE TEAM

#### Denver Service Center

Richard Alesch, Planner/Project Manager  
Nancy Baker, Landscape Architect  
Dave Fritz, Historian  
Jan Harris, Environmental Compliance Specialist  
Marilyn Hof, Interpretive Planner  
Maurice Miller, Transportation Planner

#### Midwest Regional Office

David Given, Chief, Division of Planning and Environmental Quality

#### Sleeping Bear Dunes National Lakeshore

Richard Peterson, Superintendent  
Michele D'Arcy, Landscape Architect

### PUBLICATION SERVICES

Greg Sorensen, Writer/Editor, Branch of Publications and Graphic Design  
Linda Ray, Visual Information Specialist, Branch of Publications and Graphic Design

### CONSULTANTS

#### Denver Service Center

Art Stanley, Historical Architect

#### Harpers Ferry Center

Linda Finn, Interpretive Planner  
Rick Strand, Exhibit Designer  
Ray Price, Chief, Wayside Exhibits Division

#### Midwest Regional Office

Jill York O'Bright, Regional Historian

#### Sleeping Bear Dunes National Lakeshore

John Abbett, Assistant Superintendent  
Ray Kimpel, Management Assistant  
Charles Parkinson, Chief of Interpretation  
Dave Herrera, former Management Assistant  
Max Holden, Resource Management Specialist  
Bill Herd, Cultural Resource Management Specialist  
Wayne Vander Tuin, Chief of Maintenance  
Pete LaValley, Building and Utility Foreman  
Tom Haywood, Roads and Trails Foreman

#### Sleeping Bear Dunes Preservation Committee

Marie Scott



As the nation's principal conservation agency, the Department of the Interior has responsibility for most of our nationally owned public lands and natural and cultural resources. This includes fostering wise use of our land and water resources, protecting our fish and wildlife, preserving the environmental and cultural values of our national parks and historical places, and providing for the enjoyment of life through outdoor recreation. The department assesses our energy and mineral resources and works to ensure that their development is in the best interests of all our people. The department also promotes the goals of the Take Pride in America campaign by encouraging stewardship and citizen responsibility for the public lands and promoting citizen participation in their care. The department also has a major responsibility for American Indian reservation communities and for people who live in island territories under U.S. administration.

